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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/738,402	12/17/2003	Xiaohong Gayden	GP-303509	8007

7590 10/11/2006

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EXAMINER

JOHNSON, JONATHAN J

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/738,402

Applicant(s)

GAYDEN ET AL.

Examiner

Jonathan Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-10 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8-10 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of US 2,906,006 (Neal) and US 3,334,398 (Middleton). AAPA teaches providing a first sheet of material having a first bonding face and a first outer face and a second sheet of material having a second bonding face and a second outer face (specification, paragraph 2); bonding said first and second sheets together (specification, paragraph 4); applying a conductive coating onto said first and second outer face (specification, paragraph 2). Neal teaches creating a plurality of patterned areas using an antibonding material on at least one of said first bonding face and said second bonding face injecting fluid between said first and second sheets thereby causing the first sheet to project outward at said plurality of patterned areas wherein a first fluid channel having defined inlet and outlet is defined on said outer face and wherein a second fluid flow channel is defined between the first and second sheets at said plurality of patterned area (col. 3, ll. 65-70 and col. 4, ll. 5-60, where at the first, second, and third flow paths the first and second sheets are projected outwards) and imposing a force onto at least one of said first and second outer face thereby joining said first and second sheets at said bonding area (col. 4, ll. 1-60), where the thickness after pressure bonding would necessarily be less than the pre-bonding thickness; placing said first and second bonded sheets into a die

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having spaced apart first and second boundaries; and injecting fluid between said first and second bonded sheets whereby extension portions contact one of said first and second boundaries so as to form a flat surface thereat (col. 6, ll. 1-20); wherein injecting fluid between said first and second sheet includes forming a flow channel between said first and second sheet (col. 6, ll. 1-20); roll bonding said first and second sheet together (col. 5, ll. 70-75); where the antibonding material is graphite (col. 5, ll. 35-40). Middleton teaches a first and second flow path not connecting (figure 4, items 17 and 18). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the heat exchanger of AAPA to utilize the particular stop off, pressure bonding, and subsequent fluid pressure in order to reduce the overall manufacturing complexity and cost (see Neal col. 1, ll. 15-60) and to modify the combined invention of AAPA and Neal to utilize a first and second flow channel that do not connect in order to form a desired system of passageways (see Middleton col. 1, ll. 45-55).

Claims 1-6, 8-10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of US 2,906,006 (Neal) and US 4,080,702 (Chatfield). AAPA teaches providing a first sheet of material having a first bonding face and a first outer face and a second sheet of material having a second bonding face and a second outer face (specification, paragraph 2); bonding said first and second sheets together (specification, paragraph 4); applying a conductive coating onto said first and second outer face (specification, paragraph 2). Neal teaches creating a plurality of patterned areas using an antibonding material on at least one of said first bonding face and said second bonding face injecting fluid between said first and second sheets thereby causing the first sheet to project outward at said plurality of

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patterned areas wherein a first fluid flow channel having defined inlet and outlet is defined on said outer face and wherein a second fluid flow channel is defined between the first and second sheets at said plurality of patterned area (col. 3, ll. 65-70 and col. 4, ll. 5-60, where at the first, second, and third flow paths the first and second sheets are projected outwards) and imposing a force onto at least one of said first and second outer face thereby joining said first and second sheets at said bonding area (col. 4, ll. 1-60), where the thickness after pressure bonding would necessarily be less than the pre-bonding thickness; placing said first and second bonded sheets into a die having spaced apart first and second boundaries; and injecting fluid between said first and second bonded sheets whereby extension portions contact one of said first and second boundaries so as to form a flat surface thereat (col. 6, ll. 1-20); wherein injecting fluid between said first and second sheet includes forming a flow channel between said first and second sheet (col. 6, ll. 1-20); roll bonding said first and second sheet together (col. 5, ll. 70-75); where the antibonding material is graphite (col. 5, ll. 35-40). Chatfield teaches a heat exchanger design having three passageways that do not connect (figure 4, item 25). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the heat exchanger of AAPA to utilize the particular stop off, pressure bonding, and subsequent fluid pressure in order to reduce the overall manufacturing complexity and cost (see Neal col. 1, ll. 15-60) and to modify the combined invention of AAPA and Neal to utilize three flow paths that do not connect in order to provide an efficient heat exchanger (see Chatfield, col. 1, ll. 5-65).

Response to Arguments

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the first fluid flow channel having a defined inlet and outlet is definedly only in the first outer face) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues Neel and Middleton teaches flow patterns between two sheets. The examiner agrees. Applicant goes on to argue that the references do not teach the claim 1 limitation of "a first fluid flow channel having defined inlet and outlet." The examiner disagrees. During patent examination, the pending claims must be "given the broadest reasonable interpretation." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). In the instant case, it is the examiner's position that even though Neel and Middleton teaches flow patterns between sheets, Neel and Middleton still meet the claim limitation because the the first sheet in each of Neel and Middleton contributes to the first flow channel.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

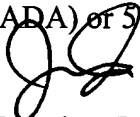
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Johnson whose telephone number is 571-272-1177. The examiner can normally be reached on M-Th 7:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jonathan Johnson
Primary Examiner
Art Unit 1725

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